CLAIMS

What is claimed is:

1. A substantially dustless animal feed premix composition in solid granular form and having a high resistance to powdering, said composition comprising a physical admixture of granular fermentation solids and at least one potency standardizer selected from the group consisting of an edible feed material and a mineral product.

2. A composition according to claim 1, wherein the granular fermentation solids, edible feed material, and mineral product are not in a compressed or compacted state.

3. A composition according to claim 1, further comprising oil, wherein said oil is present in an amount ranging from about 0.01 to about 10 % based on the weight of said animal feed supplement.

4. A composition according to claim 1, wherein said antibiotic is selected from the group consisting of amphotericin B, bacitracin, erythromycin, hygromycin B, tetracycline, chlortetracycline, demeclocycline, oxytetracycline, thiostrepton, or tylosin.

5. A composition according to claim 4, wherein said antibiotic is selected from the group consisting of tetracycline, chlortetracycline, demeclocycline, oxytetracycline.

6. A composition according to claim 5, wherein said antibiotic is chlortetracycline.

7. The composition according to claim 5, wherein said antibiotic is oxytetracycline.

8. A medicated animal feed comprising the premix composition of claim 1 in admixture with a nonmedicated animal feedstuff.

9. A composition according to claim 1, wherein said mineral product is limestone.

10. A composition according to claim 9, wherein said edible feed material is rice hulls.

11. A process for the production of a particulate, substantially dustless animal feed supplement comprising fermentation solids comprising an antibiotic product of a fermentation product, said process comprising the steps of blending said fermentation solids with an edible feed material and a mineral product to produce a mixture thereof.

12. A process of claim 11, further comprising the step of spraying a non-toxic oil into said mixture during said blending step.

13. A process according to claim 12, wherein said oil is added in an amount ranging from about 0.001 to about 11 % based on the weight of said animal feed supplement.

14. A process according to claim 11, wherein said antibiotic is selected from the group consisting of amphotericin B, bacitracin, erythromycin, hygromycin B, tetracycline, chlortetracycline, demeclocycline, oxytetracycline, thiostrepton, tylosin, and sulfas.

15. A process according to claim 14, wherein said antibiotic is selected from the group consisting of tetracycline, chlortetracycline, demeclocycline, oxytetracycline.

16. A process according to claim 15, wherein said antibiotic is chlortetracycline.

17. A process according to claim 15, wherein said antibiotic is oxytetracycline.

18. A process according to claim 11, wherein said mineral product is limestone.

19. A process according to claim 18, wherein said edible feed material is rice hulls.

20. A process for the production of a particulate, substantially dustless animal feed supplement comprising the steps of:

culturing an organism producing an antibiotic in a fermentation medium to produce a fermentation broth;

reducing said fermentation broth to obtain fermentation solids comprising said antibiotic;

drying said filtration solids to produce a dry solid;

granulating said dry solid to produce granulated fermentation solids comprising granules having a substantially uniform particle size; and

blending said granulated fermentation solids with an edible feed material and a mineral product.

21. A process of claim 20, further comprising the step of admixing said granulated fermentation solids and edible feed material with an edible oil during said blending step.

22. A process of claim 21, wherein said oil is admixed by spraying said oil onto said granulated fermentation solids, said edible feed material, and said mineral product during said blending step.

23. A process according to claim 21, wherein said oil is added in an amount ranging from about 0.001 to about 10 % based on the weight of said animal feed supplement.

24. A process according to claim 20, wherein said antibiotic is selected from the group consisting of amphotericin B, bacitracin, erythromycin, hygromycin B, tetracycline, chlortetracycline, demeclocycline, oxytetracycline, thiostrepton, or tylosin.

25. A process according to claim 24, wherein said antibiotic is selected from the group consisting of tetracycline, chlortetracycline, demeclocycline, oxytetracycline.

26. A process according to claim 25, wherein said antibiotic is chlortetracycline.

27. A process according to claim 25 wherein said antibiotic is oxytetracycline.

28. A process according to claim 21, wherein said oil is mineral oil.

29. A process according to claim 20, wherein said edible feed material is rice hulls.

30. An animal feed supplement prepared by the process of claim 20.

31. A method of combating microbial infection in animals comprising orally administering to said animals a prophylactic or therapeutic amount of an animal comestible composition comprising a medicated feed supplement according to claim 20.

32. A process for the preparation of an animal feed supplement, comprising the steps of:

culturing an organism producing an antibiotic in a fermentation medium to produce a fermentation broth comprising said antibiotic;

adding an additional quantity of said antibiotic to the fermentation broth to increase the antibiotic activity of said fermentation broth;

reducing said fermentation broth to obtain fermentation solids comprising said antibiotic;

drying said fermentation solids to produce a solid having a low moisture content; and

granulating said dried solid to produce granules having a substantially uniform particle size.

33. A process of claim 32, further comprising the step of blending said granulated fermentation solids with at least one potency standardizer selected from an edible feed material and a mineral product.

34. A process of claim 33, further comprising the step of blending said granulated fermentation solids with an edible oil.

35. A process of claim 32, wherein said antibiotic is selected from the group consisting of chlortetracycline and oxytetracycline.

36. A process of claim 32, wherein said additional quantity of said antibiotic comprises a filtrate obtained from an acidified fermentation broth.

37. A process of claim 32, wherein said additional quantity of said antibiotic comprises crude crystals of said antibiotic obtained by drying a filtrate obtained from an acidified fermentation broth.

38. An animal feed supplement prepared by the process of claim 32.

39. A method of combating microbial infection in animals comprising orally administering to said animals a prophylactic or therapeutic amount of an animal comestible composition comprising a medicated feed supplement according to claim 32.

40. A process for the preparation of an animal feed supplement, comprising the steps of:

culturing an organism producing an antibiotic in a fermentation medium to produce a fermentation broth comprising said antibiotic;

reducing said fermentation broth to obtain fermentation solids comprising said antibiotic;

adding an additional quantity of said antibiotic to the fermentation broth to increase the antibiotic activity of said fermentation broth;

drying said fermentation solids to produce a solid having a low moisture content; and

granulating said dry solid to produce granulated fermentation solids comprising granules having a substantially uniform particle size.

41. A process of claim 40, further comprising the step of blending said granulated fermentation solids with at least one potency standardizer selected from and edible feed material and a mineral product.

42. A process of claim 41, further comprising the step of blending said granulated fermentation solids with an edible oil.

43. A process of claim 40, wherein said antibiotic is selected from the group consisting of chlortetracycline and oxytetracycline.

44. A process of claim 40, wherein said additional quantity of said antibiotic comprises a filtrate obtained from an acidified fermentation broth.

45. A process of claim 40, wherein said additional quantity of said antibiotic comprises crude crystals of said antibiotic obtained by drying a filtrate obtained from an acidified fermentation broth.

46. An animal feed supplement prepared by the process of claim 40.

47. A method of combating microbial infection in animals comprising orally administering to said animals a prophylactic or therapeutic amount of an animal comestible composition comprising a medicated feed supplement according to claim 40.

48. A process for the preparation of an animal feed supplement, comprising the steps of:

providing fermentation solids, said fermentation solids comprising a low antibiotic activity;

adding an antibiotic to said fermentation solids;

drying said fermentation solids to produce a solid having a low moisture content; and

granulating said dry solid to produce granulated fermentation solids comprising granules having a substantially uniform particle size.

49. A process of claim 48, wherein said fermentation solids are prepared by:

culturing an organism producing an antibiotic in a fermentation medium to produce a fermentation broth comprising said antibiotic;

making the fermentation broth acidic; and

removing the fermentation solids from the fermentation broth.

50. A process of claim 48, wherein said antibiotic is selected from the group consisting of chlortetracycline and oxytetracycline.

51. A process of claim 48, wherein said additional quantity of said antibiotic comprises a filtrate obtained from an acidified fermentation broth.

52. A process of claim 48, wherein said additional quantity of said antibiotic comprises crude crystals of said antibiotic obtained by drying a filtrate obtained from an acidified fermentation broth.

53. A process of claim 48, further comprising the step of blending said granulated fermentation solids with at least one potency standardizer selected from an edible feed material and a mineral product.

54. A process of claim 53, further comprising the step of blending said granulated fermentation solids with an edible oil.

55. An animal feed supplement prepared by the process of claim 48.

56. A method of combating microbial infection in animals comprising orally administering to said animals a prophylactic or therapeutic amount of an animal comestible composition comprising a medicated feed supplement according to claim 48.